May 23, 2014

To: All Offerors

Subject: **Request for Proposal (RFP) No. SW052313**
Proposal Due Date: July 8, 2013

The University of California, Lawrence Berkeley National Laboratory ("University" or "LBNL") requests a proposal for Max Tech & Beyond Design Competition for Ultra-low-Energy-Use Appliances and Equipment, in accordance with this RFP and the enclosed Proposal Preparation Instructions, Sample Subcontract, and other enclosures.

It is expected the Subcontract will be performed over a period of 9 months. The estimate price range for the Subcontract is up to $25,000.00.

SUBMITTAL OF PROPOSALS
Complete written proposals must be submitted by email to the undersigned LBNL Procurement Representative no later than 5:00 PM Pacific Time on July 8, 2013. Proposal shall be in the template format provided, submitted from the Universities Sponsored Programs Office, and will be reviewed on a rolling basis. Facsimile (fax) proposals are not acceptable.

Email to swells@lbl.gov and maxtech@dante.lbl.gov

In the alternative, proposals may be mailed to the following address, provided they are received by the LBNL Procurement Representative no later than the stipulated date and time:

Lawrence Berkeley National Laboratory
Attention: Shanna Wells
Mail Stop 971-PROC
RFP SW052313
One Cyclotron Road
Berkeley, CA 94720

The proposals shall be valid for a period of 120 days from the proposal due date. Acceptance of late proposals will be at the University's sole discretion. The University reserves the right to reject any and all proposals, to waive any minor irregularities in any proposal, or to cancel this RFP at any time prior to award without cost to the University. The University will not reimburse any firm for any preparation costs or any other costs related to the participation or preparation of this RFP.

NAICS CODE AND SMALL BUSINESS SIZE STANDARD
The North American Industry Classification System (NAICS) Code for this acquisition is 54172, Research and Development in the Physical, Engineering, and Life Sciences (except Biotechnology). The corresponding small business size standard for this acquisition is 500 or fewer employees.

EVALUATION AND SELECTION
The University intends to select the responsive and responsible offeror whose proposal satisfies the minimum requirements specified in this RFP and offers the best overall value. The University will consider factors other than cost.

The University will evaluate the proposals by comparing the performance features, supplier attributes, cost, and other factors offered by each proposal, focusing on the strengths and weaknesses and striking the most advantageous balance between expected performance and the overall cost to LBNL. Offerors, therefore, must be persuasive in describing their proposed performance features, supplier attributes, and other factors and value enhancing the likelihood of successful performance and achievement of LBNL's objectives.

The University's evaluation will be based on the information provided by the offeror, the University's own experience, and/or information from the offeror's customers and other sources. The University may select an offer based on the initial proposal(s) or the University may elect to negotiate with offerors selected as finalists. The University reserves the right to make multiple awards as a result of this solicitation, if it is in the best interest of the University.

ENCLOSURES
The offeror shall complete the following enclosure and submit it with the proposal:

- Template with required general information and proposal narrative (Technical Proposal)

The following enclosures are provided and need not be returned with the proposal:

- Proposal Preparation Instructions
- Sample Subcontract and its Incorporated Documents
- MTAB Announcement

This solicitation is governed by procurement policies and procedures established under the University's Prime Contract with the U.S. Government, represented by the Department of Energy ("DOE"), for management and operation of LBNL. Proposals submitted will be treated as offers and any resulting award(s) will be a Subcontract under the Prime Contract.

If there are any questions, please contact me by phone at (510) 495-8090, or by email at swells@lbl.gov.

Sincerely,

Shanna Wells
LBNL Procurement Representative

PROPOSAL PREPARATION INSTRUCTIONS

STATEMENT OF WORK

BACKGROUND

In FY-2010, Lawrence Berkeley National Laboratory (LBNL) published a report, Max Tech and Beyond, that ranked the energy saving potential of 150 categories of appliances and equipment (henceforth referred to as appliances) used in the U.S. residential, commercial, and (in some cases) industrial sectors. Assuming Max Tech designs were to replace current equipment at the end of their lifetimes, the report estimated that 200 quads of energy could be saved in the US economy over 30 years. Aiming to turn potential into reality and to seed future energy savings, LBNL, with the support of the U.S. Department of Energy's Building Technologies Program, launched the *Max Tech and Beyond Design Competition for Ultra-Low Energy Use Appliances and Equipment* in academic year (AY) 2011/2012. The Design Competition challenged engineering design teams at U.S. universities to go beyond the current "max tech" by exploring new appliance and equipment design concepts that could become the next generation of ultra-low energy use appliances and equipment. In its first two years the competition, which culminates in a national webinar, has supported seventeen teams nationwide.

OBJECTIVE

Addressing the challenge of climate disruption requires a new generation of highly trained, efficiency-minded engineers and continuous innovation in appliance and equipment efficiency. The purpose of this subcontract is to support the work of a design team that is competing in the AY 2013/14 competition.

SCOPE

Through innovative design and testing, the team (henceforth referred to as Subcontractor) shall demonstrate that their prototype significantly reduces appliance energy consumption over the most efficient appliances currently on the market (5% or more) and/or demonstrates large cost reductions for best-on-market appliances (20% or more). Design improvements can use any approach with significant potential, including, but not limited, to combining all existing best practices and technologies into a single prototype, exploiting efficiencies of hybridization, and testing fundamentally new efficiency design concepts. All projects will culminate in a national webinar presentation and final report. The subcontractor shall also meet all required deadlines and deliverables, including bi-annual progress reports and participation in quarterly meetings, and all financial restrictions.

TASKS (exact dates to be provided by the University Technical Representative)

Team and Curriculum Development (Fall 2013)

- Finalize student teams and curriculum as needed. Select team leads.
- Submit team contact information and team plans (template provided).
- Attend first quarterly meeting (see below).
- General description of work (template provided) and photograph(s) due for team website pages.

Design Development and Procurement Phase (Fall/Winter 2013)

- Finalize design and begin purchasing as needed.
- Attend second quarterly meeting (see below).
- Submit first status report (see below).

Construction Phase (Fall/Winter/Spring 2013/2014)

- Prototype construction begins and ends.
- Updates for website team pages due.
- Attend third quarterly meeting (see below).

Testing and Analysis Phase (Winter/Spring 2014)

- Prototype testing and adjustments begun and completed.
- Submit second status report (see below).
- Attend last quarterly meeting (see below).
- Submit preliminary slides for Webinar (see below).

Presentation at National Webinar (May/June 2014)

- Participate, attend, or present at the final national teleconferenced webinar with judges in attendance.

Submit Final Team Report (June/July 2014)

- Submit final report at close of contract (see below).

COMMUNICATIONS

Review Meetings

- The Subcontractor shall participate in quarterly teleconference review, Q&A, and practice sessions during the period of performance (~September 2012, December 2013, February 2014, April 2014).
    - Agendas, preparatory information, faculty and student required attendance and participation to be reviewed and provided by the University Technical Representative.
    - Each meeting will last 1-2 hours.
- The Subcontractor shall participate in additional meetings arranged by the University Technical Representative as necessary.

Reporting

- The Subcontractor (faculty and student leads, at minimum) shall submit bi-annual status reports (November 2013; March 2014).
    - Further information and required templates to be provided by the University Technical Representative.
    - Students are required to play a role in the writing of the status reports with lead faculty review before submission.
- The Subcontractor shall submit a final detailed project report (due before the closure of the contract in June /July 2014).
    - Required outline, templates, and judging criteria to be provided by the University Technical Representative.
    - To be submitted by faculty team lead.
    - Students are expected to contribute to the final report.

- Final reports to be judged by a selected team of energy efficiency experts.

Presentation (National Webinar)

- The Subcontractor shall prepare and give a webinar presentation describing the prototype and final energy savings testing results (May /June 2014).
- Student team lead or other selected representative shall deliver the presentation.
- Faculty lead and other selected representative team member(s) are expected to attend the all-day event.
- Faculty lead and selected students will attend additional practice sessions if necessary.
- Further instructions, outlines and templates to be provided by the University Technical Representative.
- Webinar presentations to be judged by a selected team of energy efficiency experts.

PROPOSAL CONTENTS

General

The proposal should consist of a technical/management proposal and a cost proposal. The proposal should be submitted by the Universities Sponsored Projects Office with a cover letter identifying the offeror's name and address, solicitation number and title, the name(s), title(s), and telephone number(s) of the individuals in offeror's organization who have commitment authority on behalf of the offeror and will be responsible for contractual negotiations and administration of any resultant Subcontract. All files shall be submitted in PDF format and include MTAB name_RFPSW052313_University name/Lead PI last name.

Proposal Format

The proposal should describe how the Offeror will fulfill the requirements and successfully perform the Subcontract, highlighting any aspects which separate it from its competitors. The proposal narrative should be no more than (5) pages in length (double-spaced, 12 point font) in addition to the summary information, its general information, cost proposal, and lead faculty CV. For review it must meet these guidelines and all minimum requirements, the performance features and supplier attributes, and other necessary documentation as described below.

Minimum Requirements

The technical/management proposal must demonstrate that the following minimum requirements are met or exceeded:

- All information requested in this RFP is complete upon submission
  - Template with required general information and proposal narrative (technical proposal)
  - Cost proposal (see instructions below)
  - Lead faculty advisor CV
  - Additional Supporting Material if directly related to proposal

- The final proposal and all required documents MUST be submitted by the Universities Sponsored Projects Office or like representative or it will not be accepted.

- A lead faculty advisor in a suitable field of study (e.g. engineering, physics, or related) must be designated and committed to leading the project and complete up to date contact information and a curriculum vitae must be provided for that person. The faculty lead advisor must be an active faculty member at the university that is submitting the application. Potential co-leads or additional support can be indicated in the proposal.
- The team must include a minimum of at least three (3) enrolled students, undergraduate and/or graduate, from the engineering or physical science majors. Larger teams are preferred. Business students and other students can be included for projects that are developing a business plan, but they must be in addition to the required number of engineering or science students Note that teams that fall below the minimum value during the academic year will be ineligible to participate in the competition.

- The proposed prototype must focus on stationary appliances and equipment in and around residential and commercial buildings. Prototypes cannot focus on mobile sources of energy consumption (transportation) or on the buildings themselves (e.g. building design, building materials) but they can incorporate building-integrated design.

- Proposals must demonstrate the potential for a significant reduction (5% or greater) reduction in energy consumption over best-on-market products or a significant reduction (20% or greater) in the production cost of most-efficient-on-market products that have large national energy savings potential. The proposal must clearly describe to which best-on-market products the prototype would be compared.

Desired Performance Features and Supplier Attributes

The proposal should identify, describe, and discuss the performance features and supplier attributes the Offeror considers important to successful performance of the proposed subcontract. LBNL has identified the performance features and supplier attributes listed below, which are the qualitative criteria the University will use for the subjective evaluation of proposals. The Offeror should discuss them in the proposal and may identify other performance features and supplier attributes it believes may be of value to LBNL. If LBNL agrees, they will be considered in the evaluation process. In all cases, LBNL will assess the value of each proposal as submitted.

Successful performance of the proposed subcontract will require completion of all tasks, communications, and reporting outlined in the Statement of Work.

Evaluation Criteria

Proposals will be evaluated based on the following criteria:

1. Energy savings potential (Credibility of argument)
2. Potential cost savings if applicable (Credibility of argument)
3. Technical merit (How credible is the design proposal?)
4. Market potential (How likely is it that the prototype could lead to a marketable product?)
5. Creative merit (How innovative is the proposal?)
6. Educational merit (How well does this proposal contribute to the Design Competition's educational goal? What is the nature and magnitude of student involvement in the project?)
7. Practicality (Are the objectives of the proposal achievable in the allotted time?)

Cost Proposal – Educational/Non-Profit

The cost proposal must include a total estimated cost for the work. In order to help establish cost realism, the estimate shall be supported by the following information, as applicable.

- The proposed hourly direct labor rate(s), hours, and extended cost for each labor category that will be used in performing work under the resulting Subcontract. Specify current rates and escalation factors used.
- Fringe benefit Rate(s) for each labor category (extend to total fringe benefit cost).
- Facilities and Administrative Expense Rate(s) (indicate the rate and applicable base, and extend to total F&A cost).
- Total of proposed labor cost.
- Materials, subcontracts and services (itemize and include pricing support).
- Other direct costs (itemize and include pricing support).
- Total of proposed non-labor cost.
- Total Estimated Cost.

The following cost requirements will apply:

- Total faculty, post doc, engineer, and consulting salaries and related costs cannot exceed one third of the total budget.
- Pay for students, machine shop technicians (e.g. fabrication of parts for prototypes), and costs for equipment, materials and supplies must account for a minimum of 50% of the total budget.
- Final invoice will be paid once the final reports have been submitted
- No conference travel costs will be covered. Only travel in support of this research that includes student(s) will only be considered. Support for vetted or final winning teams to showcase their prototype or attend entrepreneurship workshops will be funded separately.
- Include the following summary with cost proposal, refer to Statement of Work:

PHASE	ESTIMATED COST
DESIGN/PROCUREMENT	
BUILDING	
TESTING/ANALYSIS	
FINAL PRESENTATION & REPORT	
TOTAL	

The offeror shall provide copies of current forward pricing or other rate agreements reached with a cognizant Government agency if those rates are used in the proposal. LBNL reserves the right to examine, at any time prior to award, any of those books, records, documents, or other records directly pertinent to the information requested or submitted. Depending on the circumstances, offerors may be required to submit cost or pricing data per the instructions in Table 15-2 of Federal Acquisition Regulation (FAR) 15.408, including certification of the data as current, complete and accurate upon conclusion of negotiations.

Royalty Information

If the proposal contains costs or charges for royalties totaling more than $250, the following information shall be included in the proposal relating to each separate item of royalty or license fee: name and address of licensor; date of license agreement; patent numbers, patent application serial numbers, or other basis on which the royalty is payable; brief description, including any part or model numbers of each item or component on which the royalty is payable; percentage or dollar rate of royalty per unit; unit price of item; number of units; and total dollar amount of royalties.

In addition, if specifically requested by the LBNL Procurement Representative before award, the offeror shall furnish a copy of the current license agreement and an identification of applicable claims of specific patents or other basis upon which the royalty may be payable.

E-Verify Program Enrollment Verification

The Subcontract will include FAR Clause 52.222-54, *Employment Eligibility Verification*. Accordingly, the selected offeror will be required to:

1. Be enrolled as a Federal contractor in the Government's online E-Verify system, which is located at: https://e-verify.uscis.gov/enroll) and, if necessary, provide LBNL with written verification of the enrollment;
2. Use the E-Verify system to verify the employment eligibility of all employees assigned to the Subcontract and of all new hires working in the United States, except that if the selected offeror is an institution of higher education as defined at 20 U.S.C. 1001(a), or a State or local government or the government of a Federally recognized Indian tribe, it may choose to verify only new hires assigned to the Subcontract; and
3. Include the clause in lower-tier subcontracts for construction or services exceeding $3,000, as required by the clause, and, if necessary, provide LBNL with written verification of the inclusion of the clause in the subcontracts and the lower-tier subcontractors' enrollment in the E-Verify system.

Additional information about the employment eligibility verification requirements is available at http://www.uscis.gov/everify.

ADDITIONAL INSTRUCTIONS

Offerors' Questions

LBNL will respond to questions submitted in writing to the LBNL Procurement Representative on or before **June 10, 2013.**

Email questions to: **swells@lbl.gov and maxtech@dante.lbl.gov.**

Questions submitted after this date may not be answered prior to the proposal due date. Questions must be submitted by e-mail. Answers to questions that are germane to the interpretation of LBNL's requirements will be issued to all offerors by e-mail, ensuring that the identity of all offerors will remain anonymous.

Visit the competitions website http://maxtechandbeyond.lbl.gov/ and view the 2013 national webinar recording at http://cc.readytalk.com/play?id=9ko8ft.

Acceptance of Terms and Conditions

By submission of a proposal, the offeror will be considered to have accepted the terms and conditions of the Sample Subcontract, unless specific exceptions are taken and explained. The terms and conditions have been approved by the DOE, and it is not LBNL's intent to make significant changes to them. Resolving extensive exceptions may be time consuming and result in unacceptable delays in the award of a Subcontract, and cause LBNL to consider the offeror's proposal to be non-responsive.

Proprietary Information

LBNL will treat any commercial or financial information in the proposal as proprietary information. LBNL prefers not to receive any proprietary technical information. If the proposal includes any proprietary technical information, it must be conspicuously marked as "Proprietary" or "Confidential", or an equivalent term. LBNL will endeavor to maintain proprietary information in confidence to the same degree as its own proprietary information and disclose such information to personnel other than LBNL or Government employees who are bound by an obligation of confidentiality and solely for the purpose of evaluation of the proposal.

If the offeror intends to use a product or process in which there is a proprietary or background patent position, the proposal should so indicate and list patent applications and/or patents granted (including dates, numbers, and descriptions), and whether the Government has rights related to the patents.

(End of Proposal Preparation Instructions)